

What is claimed is: What is claimed is:

1. A light source for image reading apparatuses, comprising:

a transparent substrate;

a transparent electrode layer laminated on the transparent substrate;

5 a electroluminescence layer laminated on the transparent electrode layer, of which width depends on the distance from the contact point between the electrode layer and a lead; and

a metallic electrode layer laminated on the electroluminescence layer.

10 2. A light source for image reading apparatuses, comprising:

a transparent substrate;

a transparent electrode layer laminated on the transparent substrate;

a electroluminescence layer laminated on the transparent electrode layer, of which thickness depends on the distance from the contact point  
15 between the electrode layer and a lead; and

a metallic electrode layer laminated on the electroluminescence layer.

3. A light source for image reading apparatuses, comprising:

a transparent substrate;

20 a transparent electrode layer laminated on the transparent substrate;

a electroluminescence layer laminated on the transparent electrode layer;

a metallic electrode layer laminated on the electroluminescence layer;

and

25 a plurality of connecting points between the electrode layer and the lead.

4. A light source for image reading apparatuses, comprising:

a transparent substrate;  
a transparent electrode layer laminated on the transparent substrate;  
a electroluminescence layer laminated on the transparent electrode layer;  
5 a metallic electrode layer laminated on the electroluminescence layer;  
and  
a lead being connected with at least a part of the peripheral portion of the electrode layer.

10 5. The light source for image reading apparatuses of claim 4 wherein the electroluminescence layer is insulated from the lead with an insulting film.

15 6. A light source for image reading apparatuses, comprising;  
a transparent substrate;  
a transparent electrode layer for each color of R(red), G (green), B (blue), laminated on the transparent substrate;  
a electroluminescence layer for each color of R(red), G (green), B (blue) laminated on the transparent electrode layer, of witch each area depends  
20 on the light emitting capability of the respective colors and the necessary illuminance for reading an image; and  
a metallic electrode layer laminated on the electroluminescence layer for each color of R(red), G (green), B (blue).

25 7. The light source for image reading apparatuses of claim 6 wherein the electroluminescence of the respective color R, G, B is strip-formed and the lateral direction width of the electroluminescence for each color R, G, B depends on the light-emitting capability and the

necessary illuminance.

8. The light source for image reading apparatuses of claim 7 wherein each electroluminescence layer for each color R, G, B is arranged in the direction parallel with the longitudinal direction of the transparent substrate.

9. A light source for image reading apparatuses, comprising;  
a transparent substrate;  
a transparent electrode layer for each color of R(red), G (green), B (blue), laminated on the transparent substrate;  
a electroluminescence layer for each color of R(red), G (green), B (blue) laminated on the transparent electrode layer, of witch each position depends on the light emitting capability of the respective colors and the necessary illuminance for reading an image; and  
a metallic electrode layer laminated on the electroluminescence layer for each color of R(red), G (green), B (blue).

10. A light source for image reading apparatuses, comprising;  
a plurality of light source pieces where in each source piece have a light emitting layer on a transparent substrate;  
a plurality of joint portions jointing each light source piece to provide one light source.

11. The light source for image reading apparatuses of claim 10 wherein the width at the end of the light emitting layer of each of the light source pieces is larger than the width in the center.

12. The light source for image reading apparatuses of claim 10 wherein the end face of the lateral side of the light source is slanted in relation to the lateral direction of the light source.

5 13. The light source for image reading apparatuses of claim 10 wherein the film thickness at the ends of the light emitting layer of each of the light sources is smaller than that in the center.

10 14. The light source for image reading apparatuses of claim 10 wherein the light emitting layer of each of the light source pieces is made up of a central light emitting layer making the center of the light emitting layer emit light and end light emitting layers making the ends of the light emitting layer emit light.

15 15. The light source for image reading apparatuses of claim 14 wherein the film thickness of the end light emitting layer is smaller than that of the central light emitting layer.

20 16. The light source for image reading apparatuses of claim 14 which is provided with light emitting control means for controlling voltage to be applied to the end light emitting layer and the center light emitting layer.

25 17. The light source for image reading apparatuses of claim 14 wherein the end faces of the light source piece are roughly L-shaped.

18. The light source for image reading apparatuses of claim 17 wherein the end face is off the median line parallel with the longitudinal

direction of the light source piece.

19. The light source for image reading apparatuses of claim 10 wherein the light emitting layer is made of electroluminescence.

20. The light source for image reading apparatuses of claim 6 or 9 wherein a common transparent electrode layer is used in place of each transparent electrode layer corresponding to R(red), G (green), B (blue), laminated on the transparent substrate, or a common metallic electrode layer is used in place of each metallic electrode layer corresponding to R(red), G (green), B (blue).

21. An image reading apparatus, comprising:  
a light source;  
the light source further comprising;  
a transparent substrate;  
a transparent electrode layer laminated on the transparent substrate;  
a electroluminescence layer laminated on the transparent electrode layer, of which width is depending on the distance from the contact point between the electrode layer and a lead; and  
a metallic electrode layer laminated on the electroluminescence layer.

22. An image reading apparatus, comprising:  
a light source;  
the light source further comprising;  
a transparent substrate;  
a transparent electrode layer laminated on the transparent substrate;  
a electroluminescence layer laminated on the transparent electrode

layer, of which thickness is depending on the distance from the contact point between the electrode layer and a lead; and

a metallic electrode layer laminated on the electroluminescence layer.

5           23. An image reading apparatus, comprising:

a light source;

the light source further comprising;

a transparent substrate;

a transparent electrode layer laminated on the transparent substrate;

10       a electroluminescence layer laminated on the transparent electrode layer;

a metallic electrode layer laminated on the electroluminescence layer; and

15       a plurality of connecting points between the electrode layer and the lead.

24. An image reading apparatus, comprising:

a light source;

the light source further comprising;

20       a transparent substrate;

a transparent electrode layer laminated on the transparent substrate;

a electroluminescence layer laminated on the transparent electrode layer;

25       a metallic electrode layer laminated on the electroluminescence layer; and

a lead being connected with at least a part of the peripheral portion of the electrode layer.

25. The light source for image reading apparatuses of claim 24 wherein the electroluminescence layer is insulated from the lead with an insulting film.

5 26. An image reading apparatus, comprising:

a light source;

the light source further comprising;

a transparent substrate;

10 a transparent electrode layer for each color of R(red), G (green), B (blue), laminated on the transparent substrate;

a electroluminescence layer for each color of R(red), G (green), B (blue) laminated on the transparent electrode layer, of witch each area depends on the light emitting capability of the respective colors and the necessary illuminance for reading an image; and

15 a metallic electrode layer laminated on the electroluminescence layer for each color of R(red), G (green), B (blue).

20 27. The image reading apparatus of claim 26 wherein the electroluminescences for the respective colors R, G, B are strip-formed and the lateral side widths of the electroluminescences for the colors R, G, B are widths depending on the light-emitting capability and the necessary illuminance.

25 28. The image reading apparatus of claim 17 wherein a plurality of the electroluminescences for the colors R, G, B are arranged in the direction parallel with the longitudinal direction of the transparent substrate.

29. An image reading apparatus, comprising:

a light source;

the light source further comprising:

a transparent electrode layer for each color of R(red), G (green), B (blue),  
5 laminated on the transparent substrate;

a electroluminescence layer for each color of R(red), G (green), B (blue)  
laminated on the transparent electrode layer, of witch each position  
depends on the light emitting capability of the respective colors and the  
necessary illuminance for reading an image; and

10 a metallic electrode layer laminated on the electroluminescence layer for  
each color of R(red), G (green), B (blue).

30. An image reading apparatus, comprising:

a light source;

15 the light source further comprising:

a plurality of light source pieces where in each source pieces have a  
light emitting layer on a transparent substrate;

a plurality of joint portions jointing each light source piece to provide  
one light source.

20 31. The image reading apparatus of claim 30 wherein the width of  
the end of the light emitting layer of each of the light source pieces is  
larger than the width in the center.

25 32. The image reading apparatus of claim 30 wherein the end face  
of the lateral side of the light source is slanted in relation to the laterall  
direction of the light source.



33. The image reading apparatus of claim 30 wherein the film thickness at the end of the light emitting layer of each of the light sources is smaller than that in the center.

5 34. The image reading apparatus of claim 30 wherein the light emitting layer of each of the light source pieces is made up of a central light emitting layer making the center of the light emitting layer emit light and end light emitting layers making the ends of the light emitting layer emit light.

10 35. The image reading apparatus of claim 34 wherein the film thickness of the end light emitting layer is smaller than that of the central light emitting layer.

15 36. The image reading apparatus of claim 34 which is provided with light emitting control means for controlling voltage to be applied to the end light emitting layer and the center light emitting layer.

20 37. The image reading apparatus of claim 34 wherein the end faces of the light source piece are roughly L-shaped.

25 38. The apparatus of claim 37 wherein the end face is off the median line parallel with the longitudinal direction of the light source piece.

39. The image reading apparatus of claim 30 wherein the light emitting layer is made of electroluminescence.

40. A image reading apparatuses, comprising:

a lens for reading a original document image;

two light sources formed by jointing a plurality of light source pieces,  
arranged at the right and left of the lens, and joint portions of the

5     respective light source pieces installed at right and left are formed at  
different positions in the longitudinal direction of the lens.

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